Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An article of manufacture comprising an optical-ready substrate made of a first semiconductor layer, an insulating layer on top of the first semiconductor layer, and a second semiconductor layer on top of the insulating layer, wherein the second semiconductor layer has a top surface and is laterally divided into two regions including a first region and a second region, the top surface of the first region into which fabrication of microelectronic circuitry has not yet begun being of a quality that is sufficient to permit microelectronic circuitry to be ~~formed~~ fabricated therein at a later time and said second region including an optical signal distribution circuit formed therein, said optical signal distribution circuit made up of semiconductor photonic elements interconnected by an optical waveguide made of a material that is transparent to ~~for carrying~~ an optical signal characterized by a wavelength of about 850 nanometers or less, said optical distribution circuit designed to provide signals to the microelectronic circuitry ~~circuit~~ to be fabricated in the first region of the second semiconductor layer at said later time.

2. (Previously Presented) The article of manufacture of claim 22 wherein the semiconductor photonic elements of the optical signal distribution circuit include an output element coupled to the optical waveguide for delivering signals carried by the waveguide to the microelectronic circuitry.

3. (Previously Presented) The article of manufacture of claim 2 wherein said output element is an ~~and~~ optical detector which converts optical signals to electrical signals.

4. (Previously Presented) The article of manufacture of claim 22 wherein the optical signal distribution network is an optical clock signal distribution network.

5. (Previously Presented) The article of manufacture of claim 22 wherein the first

semiconductor layer comprises silicon.

6. (Currently Amended) The article of manufacture of claim 4 wherein the insulating layer comprises ~~an oxide of~~ a silicon oxide.

7. (Canceled).

8. (Previously Presented) The article of manufacture of claim 22 wherein the combination of the first semiconductor layer, the insulating layer, and the second semiconductor layer is an SOI structure.

9. (Currently Amended) The article of manufacture of claim 22 wherein the second region of the second semiconductor layer is thicker than ~~that~~ the first region of the second semiconductor layer.

10. (Currently Amended) The article of manufacture of claim 22 wherein the top surface of the first region is of a quality that is sufficient to permit CMOS circuitry to be formed therein at the later time.

Claims 11-16 (Canceled).

17. (Previously Presented) The article of manufacture of claim 1 wherein the second semiconductor layer comprises silicon.

18. (Previously Presented) The article of manufacture of claim 17 wherein the optical waveguide includes a core made of a material selected from the group consisting of silica and silicon oxynitride.

19. (Previously Presented) The article of manufacture of claim 18 wherein the core comprises silica.

20. (Previously Presented) The article of manufacture of claim 19 wherein the silica of the core is doped with GeO_2.

21. (Previously Presented) The article of manufacture of claim 18 wherein the optical waveguide includes a cladding material surrounding the core.

22. (Previously Presented) The article of manufacture of claim 21 wherein the cladding material comprises silica.

23. (Currently Amended) The article of manufacture of claim 21 ~~11~~ wherein at least the topside of the first semiconductor chip comprises silicon.

24. (Previously Presented) The article of manufacture of claim 23 wherein the optical waveguide includes a core made of a material selected from the group consisting of silica and silicon oxynitride.

25. (Previously Presented) The article of manufacture of claim 24 wherein the core comprises silica.

26. (Previously Presented) The article of manufacture of claim 25 wherein the silica of the core is doped with GeO_2.

27. (Previously Presented) The article of manufacture of claim 24 wherein the optical waveguide includes a cladding material surrounding the core.

28. (Previously Presented) The article of manufacture of claim 27 wherein the cladding material comprises silica.